



## LIMS Selection

**An established biotech company, performed high-throughput proteomics work for internal and contract customers. This data needed to be gathered and managed effectively.**

### Business Problem

The existing LIMS had been installed when the company was at an earlier stage of its development, and was no longer suitable for the new demands. It suffered from poor performance and limited flexibility – the system was unable to cope with new types of data required by the business to carry out its new services.

Successive modifications to the old system had also made it complex and expensive to support.

### Desired Solution

The customer realised that a new LIMS would be needed that would answer the current and anticipated needs of the business. They approached Tessella to assist with the selection of a suitable product. The aim was to find the best fit between their business processes and an Off-The-Shelf LIMS, with the minimum of further customisation required.

### Gathering Requirements

A Tessella consultant worked at the customer's site to gather business requirements for the new LIMS.

- Analysing the proteomics process, from the business's perspective rather than a sample-centric view.
- Talking to users about what they liked and disliked about the current system
- Shadowing users in the lab, to see what systems they use and how they are used within the overall process

The Tessella consultant provided a clear, impartial view of the overall process that was not clouded by pre-judgements. Laboratory users tended to think in terms of the existing LIMS, making it easy to overlook potential benefits of a new LIMS in areas not serviced by the existing system. Management staff only had a high-level overview of the business needs, and were not aware of the day-to-day actions carried out in the laboratory. An external consultant could look at the business at all levels without these constraints, and build up a more complete and objective picture of what would most benefit the business. This



picture was quite different from those held by individual departments within the business.

The consultant's scientific background was of considerable benefit in communicating with the end users. It allowed the business needs to be translated into software requirements without having to divert the customer's staff into thinking about the nature of software. The consultant's experience working with businesses in the customer's sector ensured that management interests could also be discussed at an appropriate level.

### Reviewing the LIMS market

As the LIMS market is highly competitive the products from the main providers are frequently updated. A brief review of the functionality and expected directions of the available LIMS was carried out, in particular to determine the likely evolution of the market and individual products over the expected lifetime of the solution. The customer's existing LIMS had seemed appropriate when originally selected, but a longer-term view was needed when evaluating alternatives.

The unique needs of the customer's laboratory were what determined the match between environment and LIMS. All LIMS products can register samples and store results, but the differentiating factors are at the detailed level of the customer requirements.

- Could additional pre-defined experimental conditions be recorded?
- Could new experimental conditions be added in the future?
- Could the system record the sometimes complex relationships between samples (e.g. some samples are aliquots of others)

In order for a LIMS to be suitable for this customer, it had to meet as many of the customer's core needs as possible.

### Discussing the Options

Representatives from the most likely LIMS vendors were invited to give demonstrations and discuss their products with representatives from the laboratory and IT staff, together with more detailed sessions with the Tessella consultant on specific technical issues.

Approximate costs were produced for each of the candidate products, including implementation and training costs as well as license fees. Support and maintenance costs were expected to be, for most options, lower than for the old system. Benefits to laboratory staff could also be listed, though these were often intangible items that required a judgement from the customer to determine a value.

### Completing the requirements

The next stage was to write a full request for proposal, to be issued to the preferred vendors. This was based on the detailed requirements gathered earlier, prioritising the core business needs and detailing the additional requirements that were expected to be relevant over the lifetime of the LIMS.

With a detailed set of requirements and an understanding of what each of the LIMS providers could do to further the business, the customer was in a position to evaluate proposals and choose the most effective LIMS solution to their laboratory and business needs. The costs of each solution, and the providers' abilities to fulfil the requirements, could be compared, and the most productive solution chosen.

**Tessella plc** 26 The Quadrant, Abingdon Science Park, Abingdon, Oxfordshire OX14 3YS, UK  
T: +44 (0)1235 555511 | F: +44 (0)1235 553301 | E: info@tessella.com

**Tessella Inc** 233 Needham Street, Suite 300, Newton, MA 02464, USA  
T: 1 617 454 1220 | F: 1 617 454 1001 | E: info@tessella.com

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